

hand cars, or similar cars or equipment.

EFFECTIVE DATE NOTE: At 28 FR 7839, Aug. 1, 1963, the effective date of § 231.22 was stayed until further notice.

**§ 231.23 Unidirectional passenger-train cars adaptable to van-type semi-trailer use.**

(a) *Hand brakes*—(1) *Number*. Same as specified for “Passenger-Train Cars Without End-Platforms.”

(2) *Location*. Each hand brake shall be so located that it can be safely operated while car is in motion. The hand brake operating device shall be located on the end of car to the left of center.

(b) *Brake step*—(1) *Number*. One (1).

(2) *Dimensions*. Not less than twenty-eight (28) inches in length. Outside edge not less than eight (8) inches from face of car, except when “A” frame is used and extends beyond end of car, a platform of anti-skid design covering the extended portion of the “A” frame may be used as brake step.

(3) *Manner of application*. Brake step shall be securely fastened to car and when additional support is necessary, metal braces having a minimum cross-sectional area three-eighths ( $\frac{3}{8}$ ) by one and one-half ( $1\frac{1}{2}$ ) inches or equivalent shall be securely fastened to body of car with not less than one-half ( $\frac{1}{2}$ ) inch bolts or rivets.

(c) *Sill steps*—(1) *Number*. Two (2).

(2) *Dimensions*. Minimum length of tread, ten (10) preferably twelve (12) inches. Minimum cross-sectional area, one-half ( $\frac{1}{2}$ ) by one and one-half ( $1\frac{1}{2}$ ) inches, or equivalent, wrought iron, steel or other metal of equivalent strength. Minimum clear depth, eight (8) inches.

(3) *Location*. One (1) near the rear or trailing end of the car on each side, not more than twenty-four (24) inches from corner of car to center of tread of sill step.

(4) *Manner of application*. Same as specified for “Passenger-Train Cars Without End-Platforms.”

(d) *End-clearance*. No part of car above end sills except the brake step shall extend to within twenty (20) inches of a vertical plane parallel with end of car and passing through the outside edge of any part of an adjoining car.

(e) *Side handholds*—(1) *Number*. Four (4).

(2) *Dimensions*. Minimum diameter, five-eighths ( $\frac{5}{8}$ ) of an inch, wrought iron, steel or metal of equivalent strength. Minimum clear length, sixteen (16) preferably twenty-four (24) inches. Minimum clearance, two (2) preferably two and one-half ( $2\frac{1}{2}$ ) inches.

(3) *Location*. Horizontal, two (2) over each sill step. Lower handhold shall be not less than twenty-four (24) nor more than thirty (30) inches above center line of coupler. Upper handhold shall be not less than fifteen (15) nor more than nineteen (19) inches above lower handhold. Clearance of outer end of handhold shall be not more than eight (8) inches from end of car.

(4) *Manner of application*. Side handholds shall be securely fastened with not less than one-half ( $\frac{1}{2}$ ) inch bolts with nuts outside (when possible) and riveted over, or with not less than one-half ( $\frac{1}{2}$ ) inch rivets.

(f) *Horizontal end-handholds*—(1) *Number*. Seven (7).

(2) *Dimensions*. Minimum diameter, five-eighths ( $\frac{5}{8}$ ) of an inch, wrought iron, steel or other metal of equivalent strength. Minimum clear length, sixteen (16) inches. Minimum clearance, two (2) preferably two and one-half ( $2\frac{1}{2}$ ) inches.

(3) *Location*. End-sill: One (1) near each side at the rear or trailing end of car on face of end-sill or sheathing over end-sill, projecting outward or downward. Clearance of outer end of handhold shall be not more than sixteen (16) inches from side of car.

(i) Lower: One near each side of the rear or trailing end of car, not less than twenty-four (24) nor more than thirty (30) inches above center line of coupler.

(ii) Upper: One (1) near each side at the rear or trailing end of car not less than fifteen (15) nor more than nineteen (19) inches above lower handholds. Clearance of outer ends of lower and upper handholds shall be not more than eight (8) inches from side of car. Lower and upper handholds shall be spaced to coincide with corresponding side handholds, a variation of two (2) inches being allowed. On front end of car there shall be one (1) additional end handhold

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full length of car not less than forty (40) nor more than fifty (50) inches above center line of coupler. Clearance of each end of handhold shall be not more than eight (8) inches from side of car. When construction will not permit the use of a single handhold, four (4) handholds, each not less than sixteen (16) inches in length may be used, provided dimensions and location coincide.

(4) *Manner of application.* End handholds shall be securely fastened with not less than one-half ( $\frac{1}{2}$ ) inch bolts with the nuts outside (when possible) and riveted over, or with not less than one-half ( $\frac{1}{2}$ ) inch rivets. When marker sockets or brackets are located so that they cannot be conveniently reached, suitable steps and handholds shall be provided for men to reach such sockets or brackets.

(g) *Uncoupling levers.* Each car shall be equipped to provide means of coupling and uncoupling without the necessity of men going between the cars.

### § 231.24 Box and other house cars with roofs, 16 feet 10 inches or more above top of rail.<sup>1</sup>

(a) *Hand brakes*—(1) *Number.* Same as specified for “Box and Other House Cars.”

(2) *Dimensions.* Same as specified for “Box and Other House Cars.”

(3) *Location.* Each hand brake shall be located so that it can be safely oper-

ated from the end-platform. Each brake shaft shall be located on end of car to left of center and not more than twenty-four (24) inches from left side of car.

(4) *Manner of application.* Same as specified for “Box and Other House Cars.”

(b) *End-platforms*—(1) *Number.* Two (2).

(2) *Dimensions.* Width, not less than ten (10) inches. Length, full width of car.

(3) *Location.* One (1) on each end of car not more than eight (8) inches above center sill.

(4) *Manner of application.* Each end-platform shall be securely supported by not less than four (4) metal braces having a minimum cross sectional area three-eighths ( $\frac{3}{8}$ ) by one and one-half ( $1\frac{1}{2}$ ) inches or equivalent which shall be securely fastened to body of car with not less than one-half ( $\frac{1}{2}$ ) inch bolts or rivets. The outside edge of each end-platform shall be not less than six (6) inches from a vertical plane parallel with end of car and passing through the inside face of knuckle when closed with coupler-horn against the buffer-block or end sill and cushioning device (if used) at full buff. End-platform shall be made of running board material as specified for “Box and Other House Cars.”

(c) *Sill steps.* Same as specified for “Box and Other House Cars.”

(d) *End-ladder clearance.* No part of car above end-sills within thirty (30) inches from side of car, except buffer block brake-shaft, brake wheel, end-platform, horizontal end handholds, or coupling lever shall extend to within twelve (12) inches of a vertical plane parallel with end of car and passing through the inside face of knuckle, when closed with the coupler horn against the buffer block or end-sill and cushioning device (if used) at full buff, and no other part of end of car or fixtures on same above end-sill, other than exceptions herein noted, shall extend beyond outer face of buffer block.

(e) *Side handholds*—(1) *Number.* Sixteen (16).

(2) *Dimensions.* Same as specified for “Box and Other House Cars.”

(3) *Location.* Horizontal: Four (4) near each end and on each side of car spaced

<sup>1</sup>(a) Each car of this type built or rebuilt after (January 1, 1976) or under construction prior thereto and placed in service after (effective date) shall be equipped as specified in § 231.27(a) through (h) and (j) or, if it has roof hatches, as specified in § 231.28.

(b) Each car of this type placed in service after November 23, 1964 and before (effective date) shall be equipped—

(1) As specified in § 231.24; or

(2) As specified in § 231.27(a) through (h) and (j); or

(3) If it has roof hatches, as specified in § 231.28.

(c) Each car of this type placed in service before October 22, 1964, or under construction on October 22, 1964 and placed in service before November 23, 1964, shall be equipped—

(1) As specified in § 231.1; or

(2) As specified in §§ 231.1 and 231.27(i); or

(3) As specified in § 231.27(a) through (h) and (j); or

(4) If it has roof hatches, as specified in § 231.28.